REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 12-28 are presently active in this case. The present Amendment amends Claims 12, 13 and 20 and adds Claims 22-28.

In the outstanding Office Action, Claims 12-21 were rejected under 35 U.S.C. §102(b) as anticipated by Wing (U.S. Patent No. 4,549,535). Claims 12-21 were rejected under 35 U.S.C. § 102(b) as anticipated by D'Ewart, Jr. (U.S. Patent No. 3,525,887).

Independent Claim 12 is amended to recite "wherein the electromagnetic driving part comprises at least one permanent magnet and at least one coil surrounding the moving part." This amendment finds support in the specification as originally filed.[1] Dependent Claim 13 is amended in accordance with amendment of Claim 12. Claim 20 is amended to overcome a minor formality. New dependent Claims are added to vary the scope of protection of the claims. Claim 22 recites that the linear oscillator comprises one or more yokes,[2] Claim 23 recites an air gap between the permanent magnet and the case,[3] Claim 24 recites means for the reduction of eddy currents,[4] Claim 25 recites that the shaft is fixed to the moving part.[5] Claim 26 recites that the shaft is fixed to the amplitude control spindle,[6] Claim 27 recites that

[1] For example in Fig. 1 and on page 8, lines 17-24.
[2] Supported in the original specification for example on page 8, lines 19-22.
[3] Supported in the original specification for example on page 14, lines 16-24.
[4] Supported in the original specification for example on page 16, lines 12-17.
[5] Supported in the original specification for example on page 8, lines 14-17.
[6] Supported in the original specification for example on page 13, lines 22-25.

the shaft traverses the case,[7] and Claim 28 recites that the coil is fixed to the case.[8] In light of these amendments, the rejections of the claims are now moot.

In response to the rejections of Claims 12-21 under 35 U.S.C. § 102(b), Applicants respectfully request reconsideration of the rejections and traverse the rejections as discussed next.

Independent Claim 12 recites a linear oscillator, comprising a spring member disposed between the case and a moving part and between the case and an amplitude control spindle to form a spring oscillation system, wherein the moving part and the amplitude control spindle reciprocate at or near to a **resonance frequency** of the linear oscillator.

Turning to the applied prior art, Wing discloses a linear motor apparatus capable of delivering multiple impacts to the body and further cites that resonances may be set up in body tissue material to result in standing waves in the body material.[9] However, Wing fails to teach or suggest that the moving part and the amplitude control spindle reciprocate at or near to a resonance frequency of the linear oscillator or that the linear motor apparatus therein is a three-mass point system.[10] On the contrary, Wing explicitly teaches that the timing of the impacts will induce a state of resonance in such body material.[11] Wing discloses a shaft cylindrical armature 13 with a solenoid coil 31 that will cause a main shaft impact tip to strike anvil 24 (the shaft cylindrical armature 13 and the anvil 24 are not interconnected with

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[7] Supported in the original specification for example on page 8, line 15 and on Fig. 1, Fig. 3 and Fig. 17.
[8] Supported in the original specification for example on page 8, lines 16-17 and on Fig. 1, Fig. 3 and Fig. 17.
[9] See Wing for example in the Abstract and in col. 1, lines 36-40 citing "standing waves in musculature" and "resonance condition can be set up".
[10] See our Application, page 10, line 10 and in Fig. 2.
[11] See outstanding Office Action, page 2 lines 8-10 and Wing col. 4, lines 21-26.

a spring).[12] Therefore, Wing does not teach or suggest that a moving part and the amplitude control spindle reciprocate at or near to a resonance frequency of the linear oscillator. Wing also fails to disclose a permanent magnet, as recited in Claim 12.

Furthermore independent Claim 12 also recites a linear oscillator comprising an electromagnetic driving part housed in the case for reciprocating the moving part, wherein the electromagnetic driving part consists of a permanent magnet and a coil surrounding the moving part.

With respect to the applied prior art D'Ewart Jr., this reference shows a reciprocating mass system in which three masses are aligned,[13] and the two end masses as mounted from the intermediate mass are given natural frequencies essentially identical to the frequency of the power source.[14] However, D'Ewart Jr. shows the presence of permanent magnets 38 and 40 and again shows the windings 34, which operates within airgaps and may be in form of conducting bars extending from side to side and bonded into a flat sheet, this winding 34 mechanically part of lower end mass.[15] In Claim 12 as currently written, the electromagnetic driving part comprises a permanent magnet and a coil surrounding the moving part. The coil surrounding the moving part is not a winding bonded into a flat sheet.

In another aspect of D'Ewart Jr., this reference shows permanent magnets 122, 124, 126 and 128 and a power coil 142,[16] where the power coil 142 is positioned for relative reciprocation with respect to the permanent magnet assembly. In the claims as currently

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[12] See Wing on col. 3, lines 34-38.
[13] See D'Ewart Jr. on col. 1, lines 63-65.
[14] See D'Ewart Jr. on col. 3, lines 3-7.
[15] See D'Ewart Jr. on col. 3, lines 13-25 and Fig. 1 and Fig. 2.
[16] See D'Ewart Jr. on col. 11, lines 14-42 and Fig. 13 and Fig. 15.

written, however, the coil does not reciprocate relative to the permanent magnet, because the electromagnetic driving part comprises at least one permanent magnet and a coil surrounding the moving part. D'Ewart Jr. does not teach that the coil 142 surrounds the moving part and that an electromagnetic driving part comprises permanent magnets and a coil. In contrast, D'Ewart Jr. teaches that the power coil 142 is itself considered the moving part and reciprocates relative to the permanent magnets 122, 124, 126 and 128.

Therefore, the applied prior art fails to teach or suggest every feature recited in Applicants' independent Claim 12, so that Claims 12-28 are patentably distinct over the prior art. Accordingly, Applicants respectfully traverse, and request reconsideration of, the rejections based on the references Wing and D'Ewart Jr.[17]

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 12-28 is earnestly solicited.

[17] See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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